Michael Wilk HFM-380

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
1401 Rockville Pike
Rockville, MD 20852-1448

December 23, 2003

Fiona Campbell
Trinity Biotech plc
IDA Business Park
Southern Cross Road
Bray Co., Wicklow
Ireland

Re: BP030025/0
Products: Trinity Biotech Uni-Gold™ Recombigen® HIV
Uni-Gold™ Recombigen® HIV Positive and Negative Controls

Device Code: MZF

Date Received: 08-APR-2003

Dear Ms. Campbell:

The Center for Biologics Evaluation and Research (CBER) of the Food and Drug Administration (FDA) has completed its review of your premarket approval application (PMA) for the Trinity Biotech Uni-Gold™ Recombigen® HIV test. This device is indicated for the detection of antibodies to HIV-1 in human serum, plasma or whole blood (venipuncture) specimens. We are pleased to inform you that the PMA is approved. You may begin commercial distribution of the device in accordance with the conditions described below and in the "Conditions of Approval" (enclosed).

In order to ensure the safe and effective use of this device, the sale, distribution, and use of this device are restricted within the meaning of section 520(e) of the Federal Food, Drug, and Cosmetic Act (the Act) under the authority of section 515(d)(1)(B)(ii) of the Act, as follows:

(1) The labeling must specify that

(a) sale of the Trinity Biotech Uni-Gold™ Recombigen® HIV test is restricted to clinical laboratories that have an adequate quality assurance program, including planned systematic activities to provide adequate confidence that requirements for quality will be met; and where there is assurance that operators will receive and use the instructional materials;

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(b) the Trinity Biotech Uni-Gold™ Recombigen® HIV test is approved for use only by an agent of a clinical laboratory;

(c) test subjects must receive the "Subject Information Leaflet" prior to specimen collection, and appropriate information when test results are provided;

(d) the Trinity Biotech Uni-Gold™ Recombigen® HIV test is not approved for use to screen donors of blood, plasma, cells or tissues.

and

(2) You must provide a letter to all purchasers advising them of these restrictions.

We remind you that the sale, distribution, and use must not violate sections 502(q) and (r) of the Act. Further, no advertisement or other descriptive printed material issued by the applicant or private label distributor with respect to this device shall recommend or imply that the device may be used for any use that is not included in the FDA-approved labeling for the device.

As agreed upon in your Letter of Commitment dated December 19, 2003 the following post-approval commitments must be fulfilled:

1. Trinity Biotech commits to provide FDA with results from studies investigating sequence data for peptide fragments generated by Skatole treatment on an additional 2 lots of K1 protein. These data will be provided to FDA within 12 months from the date of the pre-market approval for this device.

2. Trinity Biotech commits to provide FDA with results from studies investigating the identity of a protein in the CBre3 preparation that has a molecular weight greater than 36kD on the SDS-PAGE. These data will be provided to FDA within 12 months from the date of the pre-market approval for this device.

3. Trinity Biotech commits to producing a plan to detail how it will track and monitor false-positive Trinity Biotech Uni-Gold™ Recombigen® HIV results (negative by western blot) and investigate the possibility of cross-reactivity of minor bands of the antigens with these same false-positive samples. Trinity Biotech will collaborate with 3 high throughput end users in the USA to obtain 100 such samples. Trinity will submit the results of this study to FDA when 100 samples have been collected or 12 months from the date of the pre-market approval for this device, whichever occurs first.

Expiration dating for the Uni-Gold™ Recombigen® HIV test has been established and approved at 12 months at 2 - 27°C and dating for the Uni-Gold™ Recombigen® HIV Positive and Negative Controls is 12 months at 2-8° C.

CBER does not evaluate information related to contract liability warranties, however you should be aware that any such warranty statements must be truthful, accurate, and not

misleading, and must be consistent with applicable Federal and State laws.

CBER will notify the public of its decision to approve your PMA by making available a summary of the safety and effectiveness data upon which the approval is based. The information can be found on the FDA CBER Internet website located at http://www.fda.gov/cber/products/testkits.htm. Written requests for this information can also be made to the Dockets Management Branch, (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852. The written request should include the PMA number or docket number. Within 30 days from the date that this information is placed on the Internet, any interested person may seek review of this decision by requesting an opportunity for administrative review, either through a hearing or review by an independent advisory committee, under section 515(g) of the Act.

Failure to comply with the conditions of approval invalidates this approval order. Commercial distribution of a device that is not in compliance with these conditions is a violation of the Act.

If you have any questions concerning this approval order, please contact Michael Wiack at (301) 827-5307.

Sincerely,

Hiralal Nakhasi

Hira L. Nakhasi, Ph.D.
Director
Division of Emerging and Transfusion
Transmitted Diseases
Office of Blood Research and
Review
Center for Biologics Evaluation and
Research

CONDITIONS OF APPROVAL

APPROVED LABELING. As soon as possible, and before commercial distribution of your device, submit three copies of an amendment to this PMA submission with copies of all approved labeling in final printed form to Document Control Center (HFM-99), Center for Biologics Evaluation and Research, Food and Drug Administration, 1401 Rockville Pike, Rockville, Maryland 20852-1448

ADVERTISEMENT. No advertisement or other descriptive printed material issued by the applicant or private label distributor with respect to this device shall recommend or imply that the device may be used for any use that is not included in the FDA approved labeling for the device. If the FDA approval order has restricted the sale, distribution and use of the device to prescription use in accordance with 21 CFR 801.109 and specified that this restriction is being imposed in accordance with the provisions of section 520(e) of the Act under the authority of section 515(d)(1)(B)(ii) of the Act, all advertisements and other descriptive printed material issued by the applicant or distributor with respect to the device shall include a brief statement of the intended uses of the device and relevant warnings, precautions, side effects and contraindications.

PREMARKET APPROVAL APPLICATION (PMA) SUPPLEMENT. Before making any change affecting the safety or effectiveness of the device, submit a PMA supplement for review and approval by FDA unless the change is of a type for which a "Special PMA Supplement-Changes Being Effected" is permitted under 21 CFR 814.39(d) or an alternate submission is permitted in accordance with 21 CFR 814.39(e). A PMA supplement or alternate submission shall comply with applicable requirements under 21 CFR 814.39 of the final rule for Premarket Approval of Medical Devices.

All situations which require a PMA supplement cannot be briefly summarized, please consult the PMA regulation for further guidance. The guidance provided below is only for several key instances.

A PMA supplement must be submitted when unanticipated adverse effects, increases in the incidence of anticipated adverse effects, or device failures necessitate a labeling, manufacturing, or device modification.

A PMA supplement must be submitted if the device is to be modified and the modified device should be subjected to animal or laboratory or clinical testing designed to determine if the modified device remains safe and effective.

A "Special PMA Supplement - Changes being Effected" is limited to the labeling, quality control and manufacturing process changes specified under 21 CFR 814.39(d)(2). It allows for the addition of, but not the replacement of previously approved, quality control specifications and test methods. These changes may be implemented before FDA approval upon acknowledgment by FDA that the submission is being processed as a "Special PMA Supplement - Changes Being

Effected." This procedure is not applicable to changes in device design, composition, specifications, circuitry, software or energy source.

Alternate submissions permitted under 21 CFR 814.39(e) apply to changes that otherwise require approval of a PMA supplement before implementation of the change and include the use of a 30-day PMA supplement or annual post-approval report. FDA must have previously indicated in an advisory opinion to the affected industry or in correspondence with the applicant that the alternate submission is permitted for the changes. Before such can occur, FDA and the PMA applicant(s) involved must agree upon any needed testing protocol, test results, reporting format, information to be reported, and the alternate submission to be used.

POST-APPROVAL REPORTS. Continued approval of this PMA is contingent upon the submission of post-approval reports required under 21 CFR 814.84 at intervals of 1 year from the date of approval of the original PMA. Post-approval reports for supplements approved under the original PMA, if applicable, are to be included in the next and subsequent annual reports for the original PMA unless specified otherwise in the approval order for the PMA supplement. Two copies identified as "Annual Report" and bearing the applicable PMA reference number are to be submitted to the Document Control Center (HFM-99), Center for Biologics Evaluation and Research, Food and Drug Administration, 1401 Rockville Pike, Rockville, Maryland 20852-1448. The post-approval report shall indicate the beginning and ending date of the period covered by the report and shall include the following information required by 21 CFR 814.84:

(1) Identification of changes described in 21 CFR 814.39(a) and changes required to be reported to FDA under 21 CFR 814.39(b).

(2) Bibliography and summary of the following information not previously submitted as part of the PMA and that is known to or reasonably should be known to the applicant:

   (a) Unpublished reports of data from any clinical investigations or nonclinical laboratory studies involving the device or related devices ("related" devices include devices which are the same or substantially similar to the applicant's device); and

   (b) Reports in the scientific literature concerning the device.

If, after reviewing the bibliography and summary, FDA concludes that agency review of one or more of the above reports is required, the applicant shall submit two copies of each identified report when so notified by FDA.

ADVERSE REACTION AND DEVICE DEFECT REPORTING. As provided by 21 CFR 814.82(a)(9), FDA has determined that in order to provide continued reasonable assurance of the safety and effectiveness of the device, the applicant shall submit 3 copies of a written report identified, as applicable, as an "Adverse Reaction Report" or "Device Defect Report" to MedWatch (HF-2), Food and Drug Administration, 5600 Fishers Lane, Rockville, Maryland

20852-9787 within 10 days after the applicant receives or has knowledge of information concerning:

(1) A mixup of the device or its labeling with another article.

(2) Any adverse reaction, side effect, injury, toxicity, or sensitivity reaction that is attributable to the device and

(a) Has not been addressed by the device's labeling or

(b) Has been addressed by the device's labeling, but is occurring with unexpected severity or frequency.

(3) Any significant chemical, physical or other change or deterioration in the device or any failure of the device to meet the specifications established in the approved PMA that could not cause or contribute to death or serious injury but are not correctable by adjustments or other maintenance procedures described in the approved labeling. The report shall include a discussion of the applicant's assessment of the change, deterioration or failure and any proposed or implemented corrective action by the applicant. When such events are correctable by adjustments or other maintenance procedures described in the approved labeling, all such events known to the applicant shall be included in the Annual Report described under "Post-approval Reports" above unless specified otherwise in the conditions of approval to this PMA. This post-approval report shall appropriately categorize these events and include the number of reported and otherwise known instances of each category during the reporting period. Additional information regarding the events discussed above shall be submitted by the applicant when determined by FDA to be necessary to provide continued reasonable assurance of the safety and effectiveness of the device for its intended use.

REPORTING UNDER THE MEDICAL DEVICE REPORTING (MDR) REGULATION. The Medical Device Reporting (MDR) Regulation became effective on December 13, 1984. This regulation was replaced by the reporting requirements of the Safe Medical Devices Act of 1990, which became effective on July 31, 1996, and requires that all manufacturers and importers of medical devices, including in vitro diagnostic devices, report to the FDA whenever they receive or otherwise become aware of information, from any source, that reasonably suggests that a device marketed by the manufacturer or importer:

(1) May have caused or contributed to a death or serious injury; or

(2) Has malfunctioned and such device or similar device marketed by the manufacturer or importer would be likely to cause or contribute to a death or serious injury if the malfunction were to recur.

The same events subject to reporting under the MDR Regulation may also be subject to the above "Adverse Reaction and Device Defect Reporting" requirements in the "Conditions of Approval" for this PMA. FDA has determined that such duplicative reporting is unnecessary. Whenever an event involving a device is subject to reporting under both the MDR Regulation and the "Conditions of Approval" for a PMA, the manufacturer shall submit the appropriate reports required by the MDR Regulation within the time frames as identified in 21 CFR 803.10 (c) using FDA Form 3500A, i.e., 30 days after becoming aware of a reportable death, serious injury, or malfunction as described in 21 CFR 803.50 and 21 CFR 803.52 and 5 days after becoming aware that a reportable MDR event requires remedial action to prevent an unreasonable risk of substantial harm to the public health. The manufacturer is responsible for submitting a baseline report on FDA Form 3417 for a device when the device model is first reported under 21 CFR 803.50. This baseline report is to include the PMA reference number. Any written report and its envelope is to be specifically identified, e.g., "Manufacturer Report," "5-Day Report," "Baseline Report," etc.

Any written report is to be submitted to:

Food and Drug Administration
Center for Devices and Radiological Health
Medical Device Reporting
P. O. Box 3002
Rockville, MD 20847-3002

Copies of the MDR Regulation (FOD # 336 & 1336) and FDA publications entitled "An Overview of the Medical Device Reporting Regulation" (FOD #509) and "Medical Device Reporting for Manufacturers" (FOD #987) are available on the CDRH WWW Home Page. They are also available through CDRH's Fact-On-Demand (F-O-D) at 800-899-0381. Written requests for information can be made by sending a facsimile to CDRH's Division of Small Manufacturers Assistance (DSMA) at 301-443-8818.

Uni-Gold™ Recombigen® HIV

Read this package insert completely before using the product. Follow the instructions carefully. Not doing so may result in inaccurate test results.

NAME AND INTENDED USE

Uni-Gold™ Recombigen® HIV is a single use rapid test, for the detection of antibodies to HIV-1 in plasma, serum and whole blood (venipuncture). Uni-Gold™ Recombigen® HIV is intended for use in point of care settings as an aid in diagnosis of infection with HIV-1.

This test is suitable for use in appropriate multi-test algorithms designed for the statistical validation of rapid HIV test results.

RESTRICTIONS

- Sale of Uni-Gold™ Recombigen® HIV is restricted to clinical laboratories that have an adequate quality assurance program, including planned systematic activities to provide adequate confidence that requirements for quality will be met and where there is assurance that operators will receive and use the instructional materials.
- Uni-Gold™ Recombigen® HIV is approved for use only by an agent of a clinical laboratory.
- The test subjects must receive the "Subject Information Leaflet" prior to specimen collection, and appropriate information when test results are provided.
- Uni-Gold™ Recombigen® HIV is not approved for use to screen donors of blood, plasma, cells or tissues.

SUMMARY

HIV-1 is one of the causative agents of AIDS. AIDS is the end stage of a protracted process in which the immune system of an infected person and its ability to control infections or malignant proliferative disorders are progressively destroyed (1). HIV is predominantly transmitted by unprotected sexual intercourse, perinatally from mother to child, postnatally by breast feeding or parenteral transmission (1). The most frequently HIV infection is diagnosed by tests that assess whether an individual's immune system has produced an HIV-specific immune response (1).

In the USA the standard laboratory test algorithm may take 48 hours to one week before results may be made available. This algorithm consists of screening with an enzyme immunoassay (EIA) and confirmation by retest by EIA followed by definitive confirmation by Western Blot (WB) or immuno-fluorescent (IFA) methods.

During the past two decades, HIV infection and severe HIV-related diseases (e.g., acquired immunodeficiency syndrome [AIDS]) have become a leading cause of illness and death in the United States. As of December 31, 2000, a total of 774,467 persons were reported with AIDS and 448,060 of these persons had died; the number of persons living with AIDS (322,865) was the highest ever reported. Approximately 800,000-900,000 persons in the United States are infected with HIV and approximately 275,000 of these persons might not know they are infected (2). Approximately 25 million persons each year in the United States are tested for HIV. Publicly funded counseling and testing programs conduct approximately 2.5 million of these tests each year. In 1995, 25% of these individuals testing HIV positive and 33% of persons testing HIV negative at publicly funded clinics did not return for their test results. Rapid tests to detect HIV antibody can be performed within 20 minutes, enabling health-care providers to supply definitive negative and preliminary positive results to patients at the time of testing, potentially increasing the overall effectiveness of counseling and testing programs. In comparison, results from enzyme immunoassays (EIAs) currently used for HIV screening often are not available for 1-2 weeks (3). Using rapid tests, during 1995, a total of 697,495 more persons would have learned their HIV status (3).

Many advances have been made in HIV/AIDS prevention and treatment, including the development of effective antiretroviral therapies that have reduced HIV-related illness and death. Early knowledge of HIV infection is now recognized as a critical component in controlling the spread of HIV infection (2). Rapid HIV testing allows clients to receive results the same day in a single visit, which is useful in urgent medical circumstances and settings where clients tend not to return for HIV test results (e.g., some STD clinics) (2). Advances in these areas have resulted in a revised recommendations for HIV screening of pregnant women (4,5), treating opportunistic infections and other sexually transmitted and bloodborne disease and managing occupational and non-occupational exposures and prophylaxis (6,7).

PRINCIPLES OF THE PROCEDURE

Uni-Gold™ Recombigen® HIV was designed as a rapid immunoassay based on the immunochromatographic sandwich principle and is intended to detect antibodies to HIV-1 in human serum, plasma and whole blood (venipuncture).

Uni-Gold™ Recombigen® HIV Test employs genetically engineered recombinant proteins representing the immunodominant regions of the envelope proteins of HIV-1. The recombinant proteins are immobilised at the test region of the nitrocellulose strip. These proteins are also linked to colloidal gold and impregnated below the test region of the device. A narrow band of the nitrocellulose membrane is also sensitized as a control region.

If antibodies to HIV-1 are present in the sample, they combine with an HIV-1 antigen/colloidal gold reagent and this complex binds to the immobilized antigens in the test region of the device forming a visible pink/red band. The control line should always appear as a visible pink/red band in the control region of the device to indicate that the test device is functioning correctly. A positive result is visualized by a pink/red band in the test region of the device. A negative reaction occurs in the absence of detectable levels of human immunoglobulin antibodies to HIV-1 in the specimen; consequently no visually detectable band develops in the test region of the device.

MATERIALS PROVIDED

Each kit contains:
a) 20 Test Devices (individually pouched).
b) Wash solution (5.0 ml)
c) 20 Disposable Pipettes
d) 20 Subject Information Leaflets
e) 1 Package Insert

Picture of the device contents will be presented here

Materials required and available as an accessory to the kit

Uni-Gold™ Recombigen® HIV kit controls. Catalogue number 1206530.
Each pack of controls contains Positive control 1 vial *(red cap)*, (0.5ml) and Negative control 1 vial *(black cap)* (0.5ml) and a package insert.

Materials required but not provided.

Timer or stopwatch
Blood collection devices
Biohazard disposal container
Disposable gloves

WARNINGS

For in vitro diagnostic use

Read the package insert completely before use. It is very important that the correct procedure is followed. Failure to add the patient sample may lead to a false negative result (i.e. a missed positive).

1. **The package insert instructions must be followed to ensure optimum test performance.**
2. **Before performing testing all operators must read and become familiar with the Universal Precautions for Preventation of Transmission of Human Immunodeficiency Virus, Hepatitis B virus and other Blood-borne Pathogens in Health-Care settings (8).**
3. **The FDA has approved this kit for use with serum, plasma and whole blood (venipuncture) specimens. Use of the kit with specimens other than those specifically approved for use with this device may result in inaccurate test results.**
4. **Uni-Gold™ Recombigen® HIV is for diagnostic use only and not to be used for screening donors of blood, plasma, cells or tissues.**
5. **Perform test at ambient temperature (15 – 27° C).**

PRECAUTIONS

Safety Precautions

1. Standard precautions for handling infectious agents should be observed when using this kit.
2. Wear standard protective clothing such as lab coat and disposable gloves when handling specimens and assay reagents in accordance with local regulations.
3. Wash hands thoroughly after use.

4. In the case of wash buffer contact with eyes, rinse immediately with plenty of water and seek medical advice.

Appropriate biosafety practices should be followed when handling specimens and reagents. These precautions include, but are not limited to the following:

1. Do not smoke, eat, drink, apply cosmetics or handle contact lenses in areas where specimens are handled.
2. Dispose of all specimens, used devices and pipettes as though they are capable of transmitting infection. The preferred methods of disposal are by autoclaving at 121°C for a minimum of 60 minutes or by incineration. Disposable materials may be incinerated. Liquid waste may be mixed with appropriate chemical disinfectants. A solution of 10% bleach is recommended. Allow 60 minutes for effective decontamination. **NOTE: Do not autoclave solutions containing bleach.** For additional information on biosafety refer to "Universal Precautions for Prevention of Transmission of Human Immunodefeciency Virus, Hepatitis B virus and Other Blood-borne pathogens in Health Care settings (8).
3. When disposing of wash buffer, avoid contact with acid to prevent liberation of a toxic gas.
4. All spills should be wiped thoroughly using a suitable disinfectant such as a sodium hypochlorite solution.
5. Use a separate disposable pipette and device for each specimen tested.
6. Do not pipette by mouth.

Handling Precautions

1. Do not use any device if the pouches have been perforated.
2. Each device is for single use only.
3. Do not mix reagents from different kit lots.
4. Do not use the kit past the expiration date.
5. Adequate lighting is required to read the test results.
6. Read results 10 minutes following the addition of the sample and wash solution.

STORAGE INSTRUCTIONS

Uni-Gold™ Recombigen® HIV device and wash solution should be stored between 2-27°C.
Kit components are stable until expiration date when stored as directed.
If stored refrigerated, ensure that the pouched device is brought to ambient temperature (15° – 27°C before opening).
Do not use beyond expiration date.
Do not freeze the kit.

Store the separately supplied Uni-Gold™ Recombigen® HIV kit controls at 2-8°C.

SPECIMEN COLLECTION AND STORAGE

Serum, plasma or whole blood collected by venipuncture may be used.
EDTA, Citrate or Heparin should be used as the anticoagulant.

Samples can be stored at ambient temperature (15°- 27°C) for up to 8 hours after which they should be refrigerated, or frozen for long term storage.

TEST PROCEDURE

1) Ensure that the Subject Information Leaflet has been given to the subject and subject consent obtained in accordance with local regulations.
2) Allow the kit and samples to reach room temperature (15 – 27°) (at least 20 minutes) if previously refrigerated. Remove the required number of Uni-Gold™ Recombigen® HIV devices from their pouches. Perform no more than 10 tests simultaneously.
3) Lay the devices on a clean flat surface.
4) Label each device with the appropriate patient information / ID.

Picture of pouched device and wash buffer to be added here

5) Draw up adequate sample to the first gradation on the pipette (serum or plasma or whole blood, venipuncture) using one of the disposable pipettes supplied. Use only the pipette supplied and do not reuse. See picture. If controls are being run these must be used as described in the package insert provided with the controls.

Picture of pipette with gradation to be added here

6) Holding the pipette vertically over the sample port, add one (1) drop of sample carefully and allow to absorb. Ensure air bubbles are not introduced into the sample port.

Picture of an open device with sample being dropped on by the pipette (write a patient number on the device)

7) Holding the bottle in a vertical position, add four (4) drops of the wash solution from the dropper bottle to the sample port.
8) Set timer for 10 minutes.
9) Read test results immediately after 10 minutes incubation time.
10) Follow CDC Guidance to report to the test subjects the test results and its interpretation (9)

Picture of open device with wash buffer being dropped

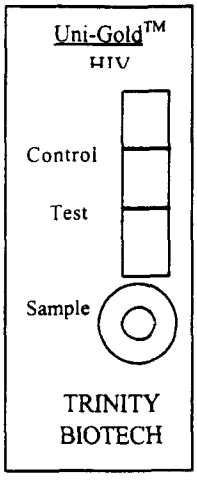
Allow 10 minutes from the time of wash solution addition for reaction to occur. The result should be read immediately after the 10 minute incubation time.

QUALITY CONTROL

Good Laboratory Practices necessitate the use of control specimens to ensure proper device performance. Uni-Gold™ Recombigen® HIV kit controls (Product Code : 1206530) must be run by all new operators of the device, each new kit lot, a change in the conditions of testing and at periodic intervals as specified in your Quality Assurance program. These controls must give the expected positive or negative results. Otherwise the test results are not valid.

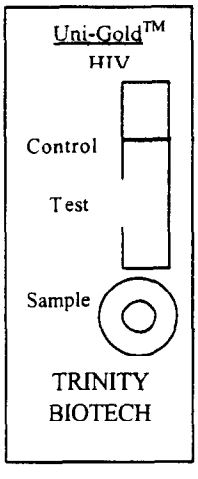
A built-in control on the test device indicates that the test is functioning correctly. A pink/red band should always appear at the control region. The formation of this control line does not validate the addition of patient sample. **As with the running of all diagnostic tests extreme care must be employed to follow the correct procedure.**

TEST RESULTS AND INTERPRETATION OF RESULTS



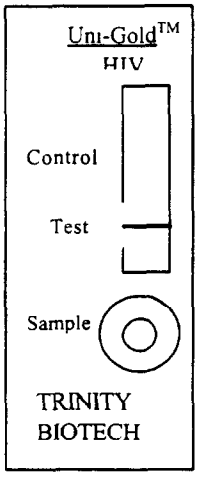
Reactive Test Result

A line appears adjacent to "Control" and adjacent to "Test" in the device window.
A line of any intensity at both "Test" and "Control" regions indicates a reactive result that is interpreted as Preliminary Positive for HIV-1 antibodies

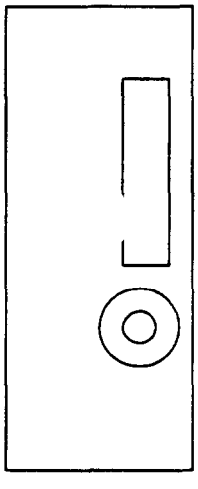


Non-Reactive Test Result

A line appears only adjacent to "Control" in the device window. No line appears at the "Test" region.
A line at the "Control" region only indicates a non-reactive result that is interpreted as Negative for HIV-1 antibodies.



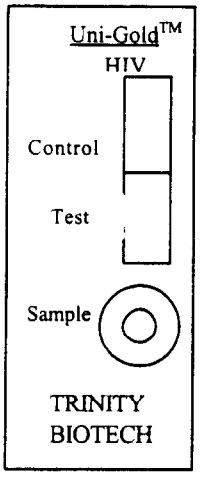
OR



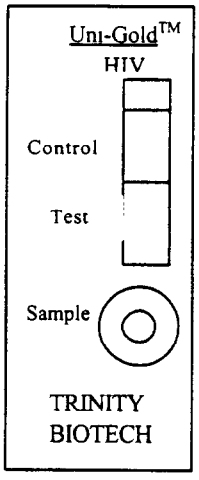
Invalid Result

No line appears at the "Control" region irrespective of a line developing at the "Test" region. This is an Invalid result that cannot be interpreted.

The test should be repeated in duplicate with fresh devices.



OR



Invalid Result

Lines do not appear ADJACENT to "Control" or "Test" regions in the window. This is an invalid result that cannot be interpreted. The test should be repeated in duplicate with fresh devices.

LIMITATIONS

1. Uni-Gold™ Recombigen® HIV procedure and interpretation of results must be followed closely as described in the package insert when testing for the presence of HIV-1 antibodies in serum, plasma or whole blood (venipuncture).

2. Uni-Gold™ Recombigen® HIV is designed to detect antibodies to HIV-1 in undiluted human serum, plasma and whole blood collected or whole blood (venipuncture). Other body fluids may not give accurate results and must not be used.

3. Immunosuppressed or immunocompromised individuals infected with HIV-1 may not produce antibodies to the virus. Testing with any kit designed to detect antibodies may give negative results in this incidence and would not be a reliable test method for such patients.

4. The intensity of a line at the "test" region does not necessarily correlate to the titre of antibody in the specimen.

5. A Reactive result by Uni-Gold™ Recombigen® HIV should be interpreted as preliminary positive for HIV-1 antibodies.

6. A Reactive result by Uni-Gold™ Recombigen® HIV suggests the presence of anti-HIV-1 antibodies in the specimen. Uni-Gold™ Recombigen® HIV is intended as an aid in the diagnosis of infection with HIV-1. AIDS and AIDS-related conditions are clinical symptoms and their diagnosis can only be established clinically.

7. A Non-Reactive result with Uni-Gold™ Recombigen® HIV does not exclude the possibility of infection with HIV. A false negative result may occur in the following circumstances:

- Recent infection. Antibody response to a recent exposure may take several months to reach detectable levels.
- The test procedure has not been correctly followed.
- Infection with a variant of the virus that is less detectable by Uni-Gold™ Recombigen ® HIV assay configuration.
- Antibodies to variant strain of HIV-1 in the patient that do not react with specific antigens utilized in the assay configuration.
- Adverse specimen handling conditions.
- Failure to add sample.

Reading test results earlier or later than 10 minutes may give erroneous results.

PERFORMANCE CHARACTERISTICS

SENSITIVITY

The sensitivity of Uni-Gold™ Recombigen® HIV was evaluated testing fresh serum, plasma and whole blood (venipuncture) samples. A total of 1032 HIV-1 positive samples were run on Uni-Gold™ Recombigen® HIV. 1000 of these were collected from individuals known to be HIV-1 sero-positive, and previously confirmed as positive by western blot. A further 32 samples were collected from individuals from high risk populations of unknown HIV serostatus who were subsequently found to be repeatedly reactive using a licensed HIV-1 EIA and positive by Western Blot. Uni-Gold™ Recombigen® HIV test was reactive for all these samples when tested using the serum, plasma and whole blood (venipuncture) portion of each sample set, to give 100% sensitivity in these studies (1032/1032 = 100% 95% C.I. = 99.5 – 100.0%). Two samples reactive by Uni-Gold™ Recombigen® HIV, from individuals known to be positive for HIV-1 were initially non-reactive by the FDA licensed screening assay. These samples were treated as per the protocol as positive samples and included in the calculations presented in Table 1. In the calculations the sensitivity of Uni-Gold™ Recombigen® HIV has been based on the initial and not repeat test result.

Table 1: Performance of Uni-Gold™ Recombigen® HIV on initial serum, plasma and whole blood samples, in comparison to EIA and western blot from individuals sero-positive for HIV-1

Test Group	Uni-Gold™ Recombigen® HIV Serum Positive	Uni-Gold™ Recombigen® HIV Plasma Positive	Uni-Gold™ Recombigen® HIV Whole Blood Positive	EIA reactive	Western Blot positive
High risk(n=1000)	35	34	34	32	32
Known HIV positive (n=1000)	1000	1000	1000	998?	1000
TOTAL	1035	1034	1034	1030	1032

?2 samples were initially non reactive by the EIA. These samples were reactive on EIA repeat testing.

Eleven HIV-1 seroconversion panels were tested in comparison to FDA licensed EIA and Western blot tests. Each panel consisted of sequential specimens obtained from a single individual during seroconversion. The eleven seroconversion panels consisted of 79 specimens. The results of this study are shown in Table 2. The Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies at the same bleed or at an earlier bleed than the most sensitive of the licensed EIA's in 8 out of 11 panels. In the remaining 3 panels the Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies one bleed later that the most sensitive EIA.

Table 2: Summary of Seroconversion panel results in comparison to FDA licensed EIAs.

Panel	Relative Day of Bleed	Uni-Gold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
D	0	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	49	NR	NR	NR	NR	NR	NR	NEG
	92	R	R	R	R	R	R	PO
	99	R	R	R	R	R	R	PO
P	0	NR	NR	NR	NR	NR	NR	NEG
	4	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	15	NR	NR	NR	NR	NR	NR	NEG
	30	R	R	R	R	R	R	NEG
	35	R	R	R	R	R	R	PO
X	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	8	NR	NR	NR	NR	NR	NR	NEG
	10	NR	NR	NR	NR	NR	NR	NEG
	26	NR	NR	NR	NR	NR	NR	NEG
	33	R	NR	R	NR	NR	NR	NEG
	35	R	R	R	NR	NR	NR	NEG
	40	R	R	R	NR	NR	R	PO
AD	0	NR	NR	NR	NR	NR	NR	NEG
	4	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	18	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	25	R	NR	R	NR	NR	NR	IND
	28	R	NR	R	NR	R	R	PO
AF	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	15	NR	NR	NR	NR	NR	NR	NEG
	28	R	NR	R	NR	NR	NR	NEG
	33	R	R	R	NR	R	R	PO
	35	R	R	R	R	R	R	PO
	42	R	R	R	R	R	R	PO
AJ	0	NR	NR	NR	NR	NR	NR	NEG
	10	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	24	NR	NR	NR	NR	NR	NR	NEG
	28	NR	NR	NR	NR	NR	NR	NEG
	43	R	R	R	R	NR	R	PO
AK	0	NR	NR	NR	NR	NR	NR	NEG
	5	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	12	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	19	NR	NR	R	NR	NR	NR	NEG
	21	R	R	R	NR	NR	R	IND
	0	NR	NR	NR	NR	NR	NR	NEG

Panel	Relative Day of Bleed	Uni-Gold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
AL	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	R	NR	NR	NR	NEG

Table 2: continued

Panel	Relative Day of Bleed	UniGold™ Recombigen® HIV result	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
A N (e)	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	23	NR	NR	NR	NR	NR	NR	NEG
	103	R	R	R	R	R	R	POS
AP	0	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	11	R	NR	R	NR	NR	NR	NEG
	15	R	NR	R	NR	NR	NR	IND
	18	R	R	R	NR	NR	RR	IND
	22	R	R	R	NR	R	R	IND
	25	R	R	R	R	R	R	IND
	29	R	R	R	NR	R	R	IND
AS	0	NR	NR	NR	NR	NR	NR	NEG
	5	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	12	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	R	NR	NR	NR	NEG
	19	R	NR	R	NR	NR	NR	NEG
	21	R	R	R	NR	NR	NR	IND

Table Key: R= Reactive, NR = Not Reactive, RR = Repeat Reactive; POS = Positive, NEG = Negative, IND = Indeterminate. EIA = FDA licensed EIA

Two commercially available low titre HIV-1 panels and one in-house low titre panel were tested by Uni-Gold™ Recombigen® HIV in comparison with FDA licensed EIA tests. In this study Uni-Gold™ Recombigen® HIV was shown to have comparable sensitivity to FDA licensed EIAs. Results are presented in Tables 3, 4 and 5.

Table 3: Result Summary of First Low Titre Panel: PRB 107

Panel Member PRB 107	UniGold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
01	R	NR	R	R	NR	NR	NEG
02	R	NR	R	R	R	NR	IND
03	R	NR	R	NR	NR	NR	NEG
04*	R	R	R	R	R	NR	NEG
05	NR	NR	NR	NR	NR	NR	NEG

06	R	RR	RR	RR	RR	NR	NEG
07	NR	NR	RR	RR	NR	NR	NEG
08	R	NR	RR	NR	RR	NR	NEG
09	NR	NR	RR	NR	NR	NR	NEG
10	R	RR	RR	RR	RR	RR	NEG
11	R	RR	RR	NR	RR	RR	POS
12	R	NR	RR	NR	NR	NR	NEG
13	R	NR	RR	RR	NR	NR	IND
14	R	RR	RR	RR	RR	RR	POS
15	R	RR	RR	RR	RR	RR	IND

Key: R= Reactive, NR = Not Reactive, RR = Repeatedly Reactive
POS = Positive, NEG = Negative, IND = Indeterminate

Table 4 Result Summary of Second Low Titre Panel: PRB 108

Panel Member PRB 108	UniGold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	Western Blot	Rapid Test
01	R	RR	RR	RR	POS	R
02	NR	NR	NR	NR	NEG	NR
03	R	RR	RR	RR	IND	R
04	R	RR	RR	RR	POS	NR
05	R	RR	RR	RR	POS	R
06	R	RR	RR	RR	IND	NR
07	R	RR	RR	RR	POS	R
08	R	RR	RR	RR	POS	R
09	R	RR	RR	NR	POS	NR
10	R	RR	NR	NR	IND	NR
11	R	RR	RR	RR	POS	R
12	NR	RR	NR	NR	NEG	NR
13	R	RR	NR	NR	IND	R
14	NR	RR	NR	NR	NEG	NR
15	R	RR	RR	RR	IND	NR

Key: R= Reactive, NR = Not Reactive, RR = Repeatedly Reactive
POS = Positive, NEG = Negative, IND = Indeterminate (according to western blot specifications)

Table 5: Third Low Titre Panel: In-House

In- House Panel Member	UniGold™ Recombigen® HIV	EIA 1	EIA 2	Western Blot
CRC 42015	R	R	NR	POS
CRC 42013	R	R	NR	POS
CRC 42025	R	R	NR	IND
CRC 42049	R	R	NR	IND
CRC 42071	R	R	NR	POS
CRC 42075	R	R	NR	POS
CRC 42119	R	R	NR	POS

Key: R= Reactive, NR = Not Reactive, POS = Positive, NEG = Negative, IND = Indeterminate, EIA = FDA licensed EIA

The sensitivity of Uni-Gold™ Recombigen® HIV was further investigated by testing samples from persons with unrelated medical conditions and interfering substances. 200 samples from subjects with other medical conditions were spiked with HIV-1 antibody positive serum. The medical conditions included, Cytomegalovirus, Rubella IgG, Epstein Barr Virus, Anti-Nuclear Antibody, Hepatitis B Core Antibody, Hepatitis B Surface Antigen, Hepatitis C Virus Antibody, other Auto immune diseases, other disease states and samples from persons recently vaccinated against Viruses do not affect the performance of Uni-Gold™ Recombigen® HIV. In addition, 20 samples with interfering substances, such as haemolysed, lipemic, high protein, high bilrubin, sarcoid and multiple myeloma samples were spiked with HIV-1 antibody positive serum and tested. These potentially interfering substances do not affect the performance of Uni-Gold™ Recombigen® HIV.

SPECIFICITY

The specificity of Uni-Gold™ Recombigen® HIV was evaluated testing fresh serum, plasma and venipuncture whole blood samples. A total of 1968 HIV-1 EIA negative individual samples were run as serum, plasma and whole blood on Uni-Gold™ Recombigen® HIV.

1000 of these were collected from individuals of unknown HIV-1 serostatus in a low risk population, and subsequently confirmed as negative by EIA. Of these 1000 samples 2 were reactive in initial test by plasma and serum and 3 by whole blood when tested by Uni-Gold™ Recombigen® HIV.

Therefore in a low risk population the specificity of Uni-Gold™ Recombigen® HIV in these studies was
99.8% (95% Confidence interval = 99.3 – 100%) for serum,
99.8% (95% Confidence interval = 99.3 – 100%) for plasma and
99.7% (95% Confidence interval = 99.0 - 100%) for whole blood.

A further 968 samples were collected from individuals of unknown HIV-1 sero-status, from a high risk population, who were subsequently found to be HIV-1 sero-negative by EIA. Of these 968 samples, 2 were reactive by plasma and whole blood and 3 by serum when tested by Uni-Gold™ Recombigen® HIV.

Therefore in a high risk population the specificity of Uni-Gold™ Recombigen® HIV in these studies was
99.7% (95% Confidence interval = 99.0 – 100%) for serum,
99.8% (95% Confidence interval = 99.2 – 100%) for plasma and
99.8% (95% Confidence interval = 99.2 – 100%) for whole blood.

This data is combined and summarized in Table 6.

Table 6: Performance of Uni-Gold™ Recombigen® HIV from individuals presumed negative for HIV infection. Protocols 1 and 2 (Combining negative samples from low and high risk populations)

Test Group	Uni-Gold™ Recombigen® HIV serum negative	Uni-Gold™ Recombigen® HIV plasma negative	Uni-Gold™ Recombigen® HIV whole blood negative	EIA negative
Low risk (n=1000)	998	998	997	1000
High Risk? (n=1000)	965	966	966	968

?This sample set consisted of 32 true HIV-1 positive samples

To further evaluate the specificity of Uni-Gold™ Recombigen® HIV the product was challenged for antibody cross reactivity with sera from individuals with other disease states. Two hundred (200) specimens from patients with non HIV-1 medical conditions, and confirmed as HIV – 1 negative were tested to verify that samples of various antibody positive viral infections do not interfere with expected results. The results are summarized in Table 7:

Table 7: Results from samples with other medical conditions

Disease State Sample Tested	Number Tested	Number Correctly Identified (Non Reactive)	%
Cytomegalovirus Positive	20	20	100%
Rubella IgG Positive	20	20	100%
Epstein Barr Virus Positive	20	20	100%
Rheumatoid Factor Positive	10	10	100%
Anti-Nuclear Antibody Positive	20	20	100%
Hepatitis B Core Antibody Positive	20	20	100%
Hepatitis B Surface Antigen Positive	20	20	100%
Hepatitis C Virus Antibody Positive	30	30	100%
Other auto immune samples	10	10	100%
Other disease states	20	20	100%
Recently Vaccinated against Viruses	10	10	100%
Total	200	200	100%

In addition , 20 samples with interfering substances, such as haemolysed, lipemic, high protein, high bilrubin, sarcoid and multiple myeloma samples were tested. These potentially interfering samples do not affect the performance of Uni-Gold™ Recombigen® HIV.

REPRODUCIBILITY

Uni-Gold™ Recombigen® HIV was found to be consistent and stable when three different lots of Uni-Gold™ Recombigen® HIV were tested by 2 operators, at 2 separate sites, testing 7 coded and blinded samples, 5 times a day, over 4 days. 840 tests were run (420 per site), with a total of 60 tests per sample. The overall reproducibility of the device was found to be excellent.

The evaluation of the sensitivity and specificity of Uni-Gold™ Recombigen® HIV test involved 15 operators, at 3 separate sites (5 per site), running 3000 samples per site over a period of 3 months. When the sensitivity and specificity achieved by each operator is evaluated there is no statistical difference in the performance of the product from one operator to another.

Concordant results were observed when 3 lots of Uni-Gold™ Recombigen® HIV were tested on the 14 member FDA HIV-1 lot release panel. All Uni-Gold™ Recombigen® HIV results matched with the expected results as indicated on the data sheet provided by the FDA.

REFERENCES

(1) Schupbach et al, Clinical Virology Manual. 3rd Edition 2000; 37: 513-541.
(2) CDC. Revised Guidelines for HIV Counseling , Testing and Referral and Revised Recommendations for HIV screening of Pregnant Women. MMWR 2001; 50(19);32-35.
(3) CDC. Update: HIV Counseling and Testing using Rapid Tests-United States United States, 1995. MMWR 1998; 47(11).
(4) Dabis et al., 6-month efficacy, tolerance and acceptability of a short regimen of oral zidovudine to reduce vertical transmission of HIV in breastfed children in Cote d'Ivoire and Burkina Faso: a double-blind placebo controlled multicentre trial. Lancet 1999; 353:786-92
(5) Mofenson et al. Advances and research irections in the prevention of mother-to-child HIV-1 transmission. Lancet 2000; 355:2237-44
(6) Correspondence, Lancet 2000; 355: 9214
(7) Rapparini et al. The impact of rapid HIV testing to limit unnecessary post exposure prophylaxis following 9.442 occupational exposures. (Abstract MoOrD1106) X1V International AIDS conference. July 7-12 2002 Barcelona
(8) CDC. Universal precautions for preventation of transmission of human immunodeficiency virus, hepatitis B virus and other blood-borne pathogens in health-care settings. MMWR 1988; 37(24):377-388.
(9) CDC Revised guidelines for HIV counseling MMWR Recommendations and Reports, 2001; 50 (RR-19)

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545-030 01 04

Uni-Gold™ Recombigen® HIV Control

HIV Positive and Negative Controls

Catalogue No: 1206530

NAME AND INTENDED USE

Uni-Gold™ Recombigen® HIV Controls are intended for use **only** with the Uni-Gold™ Recombigen® HIV test (Catalogue No. 1206503).

SUMMARY

Controls should be used in conjunction with Good Laboratory Procedures. Controls should be run at the beginning of a shift, with a change of operator or change of Uni-Gold™ Recombigen® HIV test lot.

PRINCIPLES OF THE PROCEDURE

Uni-Gold™ Recombigen® HIV Controls have been designed for use with the Uni-Gold™ Recombigen® HIV assay to validate the correct performance of the device in the hands of the user.

Uni-Gold™ Recombigen® HIV Positive Control is prepared from inactivated human serum or plasma. It is negative for HbsAg and anti-HCV by U.S. FDA licensed test procedures. Source materials are reactive for antigens to HIV-1.

Positive Controls do not have assigned quantitative values, each lot of material has been designed to produce a positive reaction within a target range, when tested on the Uni-Gold™ Recombigen® HIV assay.

Uni-Gold™ Recombigen® HIV Negative Controls are prepared from defibrinated delipidised human serum which has been screened for Anti-HIV-1 and HIV-2, HbsAg and Anti-HCV. Uni-Gold™ Recombigen® HIV Negative Controls have been designed to give a negative reaction when tested on the Uni-Gold™ Recombigen® HIV assay.

REAGENTS

- Uni-Gold™ Recombigen® Positive Control: 1 vial (500 µl) with red cap.
- Uni-Gold™ Recombigen® Negative Control: 1 vial (500 µl) with black cap.

Positive control contains human serum or plasma reactive for antibody for HIV-1. Source material has been treated with beta-propiolactone and ultraviolet irradiation (BP/UV). Negative control contains defibrinated delipidised human serum. Both the positive and negative controls contain 0.1% Sodium Azide as a preservative.

WARNINGS AND PRECAUTIONS

FOR *IN VITRO* DIAGNOSTIC USE ONLY

CAUTION: Handle Uni-Gold™ Recombigen® HIV Controls and all human blood products as though capable of transmitting infectious agents.

Safety Precautions

1. Do not pipette by mouth.
2. Do not eat, drink, apply cosmetics or handle contact lenses where specimens are being tested.
3. Clean any spillages by immediately and thoroughly wiping up with a suitable disinfectant such as 1% sodium hypochlorite solution.
4. Handle carefully and dispose of all specimens, controls and materials as though they contained infectious agents.

Handling Procedures

1. Do not use Uni-Gold™ Recombigen® HIV Controls beyond the expiration date.
2. Avoid microbial contamination of the controls when opening and closing the vials.

STORAGE INSTRUCTIONS

1. Store Uni-Gold™ Recombigen® HIV Controls at 2-8°C / 35.6–46.4oF
2. Store in the upright position at all times to prevent leakage.
3. Ensure cap is securely fastened when controls are not in use.
4. Once opened Uni-Gold™ Recombigen® HIV Controls are stable for one month.
5. Record the date to discard the controls (one month after opening) on the space provided on the box. This date cannot be post the expiry date of the controls printed on the box.

INDICATIONS OF REAGENT INSTABILITY OR DETERIORATION

Alterations in physical appearance may indicate instability or deterioration of Uni-Gold™ Recombigen® HIV Controls. Solutions that are visibly turbid should be discarded in accordance with safety procedures.

PROCEDURE

Materials Required but not Provided

Uni-Gold™ Recombigen® HIV pack insert. (Pt No. 545-030)

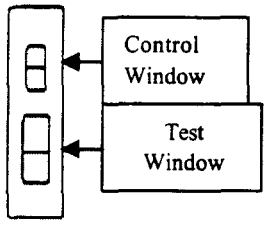
Instructions for use

1. Read the Uni-Gold™ Recombigen® HIV package insert prior to using Uni-Gold™ Recombigen® HIV Controls.

2. Remove from storage at 2-8°C and allow the controls to reach room temperature prior to use. (Return controls to storage at 2-8°C after use).
3. Mix contants of vials by gentle swirling or inversion.
4. Refer to Test Procedure section of the Uni-Gold™ Recombigen® HIV pack insert.
5. Treat Uni-Gold™ Recombigen® HIV positive and negative controls as "patient specimens".

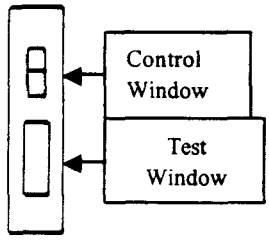
Quality Control
Results should be determined in the same manner as that used for unknown specimens when testing using the Uni-Gold™ Recombigen® HIV assay.

INTERPRETATION OF RESULTS



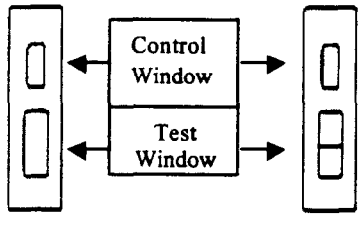
(+) POSITIVE RESULT

Two lines appear
A line in both test and control window indicates a positive result



(-) NEGATIVE RESULT

Only one line appears in the control window
A line in the control window only indicates a negative test result



INVALID RESULT

No Line appears in the Control window
Irrespective of a line developing in the test window. This is an invalid result. **Repeat Test with a fresh device and a new patient specimen.**

LIMITATIONS OF THE PROCEDURE

Uni-Gold™ Recombigen® HIV Controls are only validated for use with Uni-Gold™ Recombigen® HIV assay.

1. TEST PROCEDURES and INTERPRETATION OF TEST RESULTS section in the Uni-Gold™ Recombigen® HIV assay pack insert must be adhered to when testing Uni-Gold™ Recombigen® HIV Controls.
2. Deviations from the procedure outlined in the Uni-Gold™ Recombigen® HIV test pack insert may produce unreliable results.
3. Uni-Gold™ Recombigen® HIV Controls are intended for use in undiluted form.
4. Adverse shipping and storage conditions or use of expired reagents may produce erroneous results.

EXPECTED RESULTS

Uni-Gold™ Recombigen® HIV Controls do not have assigned values. Results should be determined in the same manner as used for unknown specimens when testing with the Uni-Gold™ Recombigen® HIV test. Each laboratory should determine its own range of acceptable values.

SPECIFIC PERFORMANCE CHARACTERISTICS

Uni-Gold™ Recombigen® HIV Controls have been validated for use with the Uni-Gold™ Recombigen® HIV test.

A positive reaction is produced when positive controls are run in the same manner as unknown specimens. Conversely a negative reaction is produced when negative controls are run in the same manner as unknown specimens.
All testing must be carried out in accordance with the Uni-Gold™ Recombigen® HIV assay pack insert.

GLP must be followed when using Uni-Gold™ Recombigen® HIV Controls.

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545-089 11/0

SUMMARY OF SAFETY AND EFFECTIVENESS

1 GENERAL INFORMATION

Device Generic Name: Rapid HIV-1 Antibody Test

Device Trade Name: Uni-Gold™ Recombigen® HIV

Applicant:
Trinity Biotech (USA)
PO Box 1059
Jamestown
New York 14702-1059
Contact; Fiona Campbell
Tel 011 353 1 276 8900
Fax 011 353 1 276 9888

Premarket approval number: BP030025

Date of notice of approval to the applicant; Dec 2003

2 NAME AND INTENDED USE

Uni-Gold™ Recombigen® HIV is a single use rapid test, for the detection of antibodies to HIV-1 in plasma, serum and whole blood (venipuncture). Uni-Gold™ Recombigen® HIV is intended for use in point of care settings as an aid in diagnosis of infection with HIV-1.

This test is suitable for use in appropriate multi-test algorithms designed for the statistical validation of rapid HIV test results.

3 DEVICE DESCRIPTION

Uni-Gold™ Recombigen® HIV was designed as a rapid immunoassay based on the immunochromatographic sandwich principle and is intended to detect antibodies to HIV-1 in human serum, plasma and whole blood (venipuncture).

Uni-Gold™ Recombigen® HIV test employs genetically engineered recombinant proteins representing the immunodominant regions of the envelope proteins of HIV-1. The recombinant proteins are immobilised at the test region of the nitrocellulose strip. These proteins are also linked to colloidal gold and impregnated below the test region of the device. A narrow band of the nitrocellulose membrane is also sensitized as a control region.

If antibodies to HIV-1 are present in the sample, they combine with a HIV-1 antigen/colloidal gold reagent and this complex subsequently binds to the immobilized

antigens in the test region of the device forming a visible pink / red band. The control line should always appear as a visible pink / red band in the control region of the device to indicate that the test device is functioning correctly. A positive result is visualized by a pink/red band in the test region of the device. A negative reaction occurs in the absence of detectable levels of human immunoglobulin antibodies to HIV-1 in the specimen; consequently no visually detectable band develops in the test region of the device.

4 RESTRICTIONS

? The sale of Uni-Gold™ Recombigen® HIV is restricted to clinical laboratories that have an adequate quality assurance program, including planned systematic activities to provide adequate confidence that requirements for quality will be met and where there is assurance that operators will receive and use the instructional materials.
? Uni-Gold™ Recombigen® HIV is approved for use only by an agent of a clinical laboratory.
? The test subjects must receive the "Subject Information Leaflet" prior to specimen collection, and appropriate information when test results are provided.
? Uni-Gold™ Recombigen® HIV is not approved for use to screen donors of blood, plasma, cells or tissues.

5 WARNINGS

1. **Uni-Gold™ Recombigen® HIV is intended for *in vitro* diagnostic use.**

2. **Read the package insert completely before use. It is very important that the correct procedure is followed. Failure to add the patient sample may lead to a false negative result, (i.e. a missed positive).**

3. **The FDA has approved this kit for use with serum, plasma and whole blood (venipuncture) specimens. Use of the kit with specimens other than those specifically approved for use with this device may result in inaccurate test results.**

4. **Uni-Gold™ Recombigen® HIV is for diagnostic use only and not to be used for screening donors of blood, plasma, cells or tissues.**

5. **Perform the test at ambient temperature (15-27°C).**

6 LIMITATIONS OF THE TEST

1. Uni-Gold™ Recombigen® HIV procedure and interpretation of results must be followed closely as described in the package insert when testing for the presence of HIV-1 antibodies in serum, plasma or whole blood (venipuncture).

2. Uni-Gold™ Recombigen® HIV is designed to detect antibodies to HIV-1 in undiluted human serum, plasma and whole blood collected or whole blood (venipuncture). Other body fluids may not give accurate results and must not be used.

3. Immunosuppressed or immunocompromised individuals infected with HIV-1 may not produce antibodies to the virus. Testing with any kit designed to detect antibodies may give negative results in this incidence and would not be a reliable test method for such patients.

4. The intensity of a line at the 'test" region does not necessarily correlate to the titre of antibody in the specimen.

5. A Reactive result by Uni-Gold™ Recombigen® HIV should be interpreted as preliminary positive for HIV-1 antibodies.

6. A Reactive result by Uni-Gold™ Recombigen® HIV suggests the presence of anti-HIV-1 antibodies in the specimen. Uni-Gold™ Recombigen® HIV is intended as an aid in the diagnosis of infection with HIV-1. AIDS and AIDS-related conditions are clinical symptoms and their diagnosis can only be established clinically.

7. A Non-Reactive result with Uni-Gold™ Recombigen® HIV does not exclude the possibility of infection with HIV. A false negative result may occur in the following circumstances:
   - Recent infection. Antibody response to a recent exposure may take several months to reach detectable levels.
   - The test procedure has not been correctly followed.
   - Infection with a variant of the virus that is less detectable by Uni-Gold™ Recombigen ® HIV assay configuration.
   - Antibodies to variant strain of HIV-1 in the patient that do not react with specific antigens utilized in the assay configuration.
   - Adverse specimen handling conditions.
   - Failure to add sample.

Reading test results earlier or later than 10 minutes may give erroneous results

7 ALTERNATE PRACTICES AND PROCEDURES

HIV-1 infection can be detected by a variety of tests. Virus can be directly detected by assays for the various virus components or more commonly HIV-1 infection is diagnosed by tests that assess whether an individual's immune system has produced an HIV-1-specific immune response. Standard testing algorithms are employed to determine HIV-1 status. Samples are screened with an EIA and positives are confirmed with Western Blot or IFA.

Uni-Gold™ Recombigen® HIV detects antibodies to HIV-1 using colloidal gold to give a visible result. Uni-Gold™ Recombigen® HIV can be carried out in the absence of instrumentation, standard laboratory equipment, even electricity. The excellent sensitivity

and specificity of Uni-Gold™ Recombigen® HIV means that it can be used test in a multi-test algorithm.

8 POTENTIAL ADVERSE EFFECTS OF THE DEVICE ON HEALTH

No known adverse effects have been found with the Uni-Gold™ Recombigen® HIV in any study performed to date.

9 SUMMARY OF NON-CLINICAL STUDIES

The following is a brief summation of the non-clinical laboratory studies that have been conducted to assess the performance of Uni-Gold™ Recombigen® HIV.

9.1 HIV Positive Samples from Worldwide Sources

The objective of this study was to determine the ability of the Uni-Gold™ Recombigen® HIV to detect HIV-1 positive samples using a large number of sera from different geographic locations representing known variants of HIV-1.

Two hundred (200) world-wide HIV – 1 positive samples were tested by Uni-Gold™ Recombigen® HIV. These included samples from the different geographic locations where non-B variants predominate and 10 group O samples.

In all geographic samples except those from Uganda the Uni-Gold™ Recombigen® HIV rapid test performed optimally giving 100% sensitivity.

9.2 Evaluation of HIV-1 seroconversion.

Eleven HIV-1 seroconversion panels were tested in comparison to FDA licensed EIA and Western blot tests. Each panel consisted of sequential specimens obtained from a single individual during seroconversion. The eleven seroconversion panels consisted of 79 specimens. The results of this study are shown in Table 2. The Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies at the same bleed or at an earlier bleed than the most sensitive of the licensed EIA's in 8 out of 11 panels. In the remaining 3 panels the Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies one bleed later that the most sensitive EIA.

Table 1: Summary of Seroconversion panel results as presented in comparison to FDA licensed EIAs.

Panel	Relative Day of Bleed	Uni-Gold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
D	0	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	49	NR	NR	NR	NR	NR	NR	NEG
	92	R	R	R	R	R	R	POS
	99	R	R	R	R	R	R	POS
P	0	NR	NR	NR	NR	NR	NR	NEG
	4	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	15	NR	NR	NR	NR	NR	NR	NEG
	30	R	R	R	R	R	R	NEG
	35	R	R	R	R	R	R	POS
X	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	8	NR	NR	NR	NR	NR	NR	NEG
	10	NR	NR	NR	NR	NR	NR	NEG
	26	NR	NR	NR	NR	NR	NR	NEG
	33	R	NR	R	NR	NR	NR	NEG
	35	R	R	R	NR	NR	NR	NEG
	40	R	R	R	NR	NR	R	POS
AD	0	NR	NR	NR	NR	NR	NR	NEG
	4	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	18	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	25	R	NR	R	NR	NR	NR	IND
	28	R	NR	R	NR	R	R	POS
AF	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	15	NR	NR	NR	NR	NR	NR	NEG
	28	R	NR	R	NR	NR	NR	NEG
	33	R	R	R	NR	R	R	POS
	35	R	R	R	R	R	R	POS
	42	R	R	R	R	R	R	POS
AJ	0	NR	NR	NR	NR	NR	NR	NEG
	10	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	24	NR	NR	NR	NR	NR	NR	NEG
	28	NR	NR	NR	NR	NR	NR	NEG
	43	R	R	R	R	R	R	POS
AK	0	NR	NR	NR	NR	NR	NR	NEG
	5	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	12	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	19	NR	NR	R	NR	NR	NR	NEG
	21	R	R	R	NR	NR	R	IND
AL	0	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	R	NR	NR	NR	NEG

Table 1: Continued; Summary of Seroconversion panel results as presented in comparison to FDA licensed EIAs.

Panel	Relative Day of Bleed	UniGold™ Recombigen® HIV result	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
AN (e)	0	NR	NR	NR	NR	NR	NR	NEG
	2	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	9	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	NR	NR	NR	NR	NEG
	16	NR	NR	NR	NR	NR	NR	NEG
	21	NR	NR	NR	NR	NR	NR	NEG
	23	NR	NR	NR	NR	NR	NR	NEG
	103	R	RR	RR	RR	RR	RR	POS
AP	0	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	11	R	NR	RR	NR	NR	NR	NEG
	15	R	NR	RR	NR	NR	NR	IND
	18	R	RR	RR	NR	NR	RR	IND
	22	R	RR	RR	NR	RR	RR	IND
	25	R	RR	RR	RR	RR	RR	IND
	29	R	RR	RR	NR	RR	RR	IND
AS	0	NR	NR	NR	NR	NR	NR	NEG
	5	NR	NR	NR	NR	NR	NR	NEG
	7	NR	NR	NR	NR	NR	NR	NEG
	12	NR	NR	NR	NR	NR	NR	NEG
	14	NR	NR	RR	NR	NR	NR	NEG
	19	R	NR	RR	NR	NR	NR	NEG
	21	R	RR	RR	NR	NR	NR	IND

Table Key; R= Reactive, NR = Not Reactive, POS = Positive, NEG = Negative, IND = Indeterminate. EIA = FDA licensed EIA

9.3 Evaluation of Low-Titre HIV-1 Antibody panels

Two commercially available low titre HIV 1 panels and one in-house produced low titre panel were tested by Uni-Gold™ Recombigen® HIV in comparison with FDA licensed EIA tests. In this study Uni-Gold™ Recombigen® HIV was shown to have comparable sensitivity to FDA licensed EIAs. Results are presented in Tables 2, 3 and 5.

Table 2: Result Summary o f First Low Titre Panel: PRB 107

Panel Member PRB 107	UniGold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	EIA 4	EIA 5	Western Blot
01	R	NR	RR	RR	NR	NR	NEG
02	R	NR	RR	RR	RR	NR	IND
03	R	NR	RR	NR	NR	NR	NEG
04*	R	RR	RR	RR	RR	NR	NEG
05	NR	NR	NR	NR	NR	NR	NEG
06	R	RR	RR	RR	RR	NR	NEG
07	NR	NR	RR	RR	NR	NR	NEG
08	R	NR	RR	NR	RR	NR	NEG
09	NR	NR	RR	NR	NR	NR	NEG
10	R	RR	RR	RR	RR	RR	NEG
11	R	RR	RR	NR	RR	RR	POS
12	R	NR	RR	NR	NR	NR	NEG
13	R	NR	RR	RR	NR	NR	IND
14	R	RR	RR	RR	RR	RR	POS
15	R	RR	RR	RR	RR	RR	IND

Key. R= Reactive, NR = Not Reactive, RR = Repeatedly Reactive
POS = Positive, NEG = Negative, IND = Indeterminate (according to Western Blot specifications)

Table 3 Result Summary of Second Low Titre Panel: PRB 108

Panel Member PRB 108	UniGold™ Recombigen® HIV	EIA 1	EIA 2	EIA 3	Western Blot	Rapid Test
01	R	RR	RR	RR	POS	R
02	NR	NR	NR	NR	NEG	NR
03	R	RR	RR	RR	IND	R
04	R	RR	RR	RR	POS	NR
05	R	RR	RR	RR	POS	R
06	R	RR	RR	RR	IND	NR
07	R	RR	RR	RR	POS	R
08	R	RR	RR	RR	POS	R
09	R	RR	RR	NR	POS	NR
10	R	RR	NR	NR	IND	NR
11	R	RR	RR	RR	POS	R
12	NR	RR	NR	NR	NEG	NR
13	R	RR	NR	NR	IND	R
14	NR	RR	NR	NR	NEG	NR
15	R	RR	RR	RR	IND	NR

Key: R= Reactive, NR = Not Reactive, RR = Repeatedly Reactive
POS = Positive, NEG = Negative, IND = Indeterminate (according to Western Blot specifications)

Table 4: Third Low Titre panel: In-House

In- House Panel Member	UniGold™ Recombigen® HIV	EIA 1	EIA 2	Western Blot
CRC 42015	R	R	NR	POS
CRC 42013	R	R	NR	POS
CRC 42025	R	R	NR	IND
CRC 42049	R	R	NR	IND
CRC 42071	R	R	NR	POS
CRC 42075	R	R	NR	POS
CRC 42119	R	R	NR	POS

Key: R= Reactive, NR = Not Reactive, POS = Positive, NEG = Negative, IND = Indeterminate, EIA = FDA licensed EIA

9.4 Effect of unrelated medical conditions and interfering substances

The sensitivity of Uni-Gold™ Recombigen® HIV was further investigated by testing samples from persons with unrelated medical conditions and interfering substances. HIV-1 positive serum was used to spike over 200 samples from subjects with other medical conditions, such as Cytomegalovirus, Rubella IgG, Epstein Barr Virus, Anti-Nuclear Antibody, Hepatitis B Core Antibody, Hepatitis B Surface Antigen, Hepatitis C Virus Antibody, other auto immune diseases, other disease states and samples from persons recently vaccinated against Viruses do not affect the performance of Uni-Gold™ Recombigen® HIV. Samples with interfering substances, such as hemolysed, lipemic, high protein, high bilrubin, sarcoid and multiple myeloma samples were spiked with HIV-1 positive serum. The potentially interfering substances did not affect the performance of Uni-Gold™ Recombigen® HIV.

9.5 Reproducibility

Uni-Gold™ Recombigen® HIV was found to be consistent and stable when three different lots of Uni-Gold™ Recombigen® HIV were tested, by 2 operators, at 2 separate sites, testing 7 coded and blinded samples, 5 times a day, over 4 days. Hence 840 tests were run (420 per site), with a total of 60 test per coded sample. The overall reproducibility of the device was found to be excellent.

The evaluation of the sensitivity and specificity of Uni-Gold™ Recombigen® HIV test involved 15 operators, at 3 separate sites (5 per site), running 3000 samples per site over a period of 3 months. When the sensitivity and specificity achieved by each operator is evaluated there is no statistical difference in the performance of the product from one operator to another.

Concordant results were observed when 3 lots of Uni-Gold™ Recombigen® HIV was tested on the 14 member FDA HIV lot release panel. All Uni-Gold™ Recombigen® HIV results matched with the expected results as indicated on the data sheet provided by the FDA.

9.6 Animal studies

No animal studies were performed using Uni-Gold™ Recombigen® HIV.

10 SUMMARY OF CLINICAL STUDIES

10.1 Sensitivity

The sensitivity of Uni-Gold™ Recombigen® HIV was evaluated testing fresh serum, plasma and whole blood (venipuncture) samples. A total of 1032 HIV-1 positive samples were run on Uni-Gold™ Recombigen® HIV. 1000 of these were collected from individuals known to be HIV-1 sero-positive, and previously confirmed as positive by western blot. A further 32 samples were collected from individuals from high risk populations of unknown HIV serostatus who were subsequently found to be repeatedly reactive using a licensed HIV-1 EIA and positive by Western Blot. Uni-Gold™ Recombigen® HIV test was reactive for all these samples when tested using the serum, plasma and whole blood (venipuncture) portion of each sample set, to give 100% sensitivity in these studies (1032/1032 = 100% 95% C.I. = 99.5 – 100.0%). Two samples reactive by Uni-Gold™ Recombigen® HIV from individuals known to be positive for HIV-1 were initially non-reactive by the FDA licensed screening assay. These samples were treated as per the protocol as positive samples and included in the calculations presented in Table 5. In the calculations the sensitivity of Uni-Gold™ Recombigen® HIV has been based on the initial and not repeat test result.

Table 5 : Performance of Uni-Gold™ Recombigen® HIV on initial serum, plasma and whole blood samples, in comparison to EIA and western blot from individuals sero-positive for HIV-1

Test Group	Uni-Gold™ Recombigen® HIV Serum Positive	Uni-Gold™ Recombigen® HIV Plasma Positive	Uni-Gold™ Recombigen® HIV Whole Blood Positive	EIA reactive	Western Blot positive
High risk (n=1000)	35	34	34	32	32
Known HIV positive (n=1000)	1000	1000	1000	998?	1000
TOTAL	1035	1034	1034	1030	1032

? 2 samples were initially non reactive by the EIA. These samples were reactive on EIA repeat testing.

Eleven HIV-1 seroconversion panels were tested in comparison to FDA licensed EIA and Western blot tests. Each panel consisted of sequential specimens obtained from a single individual during seroconversion. The eleven seroconversion panels consisted of 79 specimens. The results of this study are shown in Table 2. The Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies at the same bleed or at an earlier bleed than the most sensitive of the licensed EIA's in 8 out of 11 panels. In the remaining 3 panels the Uni-Gold™ Recombigen® HIV test detected HIV-1 antibodies one bleed later that the most sensitive EIA

10.2 Specificity

The specificity of Uni-Gold™ Recombigen® HIV was evaluated testing fresh serum, plasma and venipuncture whole blood samples. A total of 1968 HIV-1 EIA negative individual samples were run as serum, plasma and whole blood on Uni-Gold™ Recombigen® HIV.

1000 of these were collected from individuals of unknown HIV-1 serostatus in a low risk population, and subsequently confirmed as negative by EIA. Of these 1000 samples 2 were reactive in initial test by plasma and serum and 3 by whole blood when tested by Uni-Gold™ Recombigen® HIV.

Therefore in a low risk population the specificity of Uni-Gold™ Recombigen® HIV in these studies was
99.8% (95% Confidence interval = 99.3 – 100%) for serum
99.8% (95% Confidence interval = 99.3 – 100%) for plasma and
99.7% (95% Confidence interval = 99.0 - 100%) for whole blood.

A further 968 samples were collected from individuals of unknown HIV-1 sero-status, from a high risk population, who were subsequently found to be HIV-1 sero-negative by EIA. Of these 968 samples, 2 were reactive by plasma and whole blood and 3 by serum when tested by Uni-Gold™ Recombigen® HIV.

Therefore in a high risk population the specificity of Uni-Gold™ Recombigen® HIV in these studies was
99.7% (95% Confidence interval = 99.0 – 99.9%) for serum
99.8% (95% Confidence interval = 99.2 – 100%) for plasma and
99.8% (95% Confidence interval = 99.2 – 100%) for whole blood.

This data is combined and summarized in Table 6.

Table 6: Performance of Uni-Gold™ Recombigen® HIV from individuals presumed negative for HIV infection. Protocols 1 and 2 (Combining negative samples from low and high risk populations)

Test Group	Uni-Gold™ Recombigen® HIV serum negative	Uni-Gold™ Recombigen® HIV plasma negative	Uni-Gold™ Recombigen® HIV negative testing whole blood	EIA negative
Low risk (n=1000)	998	998	997	1000
High Risk? (n=1000)	965	966	966	968

?This sample set consisted of 32 true HIV-1 positive samples

11 CONCLUSIONS DRAWN FROM THE STUDIES

Risk/ Benefit Analysis

There are minimal risks from performing this test. Any physical risks that may be experienced in the performance of the test are expanded upon in the package insert.

HIV-1 is one of the causative agents of AIDS. AIDS is the end stage of a protracted process in which the immune system of an infected person and its ability to control infections or malignant proliferative disorders are progressively destroyed. HIV-1 is predominately transmitted by unprotected sexual intercourse, perinatally from mother to child, postnatally by breast feeding or parenteral transmission. Most frequently HIV-1 infection is diagnosed by tests that assess whether an individual's immune system has produced an HIV-1-specific immune response.

In the USA the standard laboratory test algorithm may take 48 hours to one week before results may be made available. This algorithm consists of screening with an enzyme immunoassay (EIA) and confirmation by retest by EIA followed by definitive confirmation by Western Blot (WB) or immuno-fluorescent (IFA) methods.

During the past two decades, HIV-1 infection and severe HIV-1-related diseases (e.g., acquired immunodeficiency syndrome [AIDS]) have become a leading cause of illness and death in the United States. As of December 31, 2000, a total of 774,467 persons were reported with AIDS and 448,060 of these persons had died; the number of persons living with AIDS (322,865) was the highest ever reported. Approximately 800,000-900,000 persons in the United States are infected with HIV and approximately 275,000 of these persons might not know they are infected. Approximately 25 million persons each year in the United States are tested for HIV. Publicly funded counselling and testing programs conduct approximately 2.5 million of these tests each year. In 1995, 25% of each persons testing HIV positive and 33% of persons testing HIV negative at publicly funded clinics did not return for their test results. Uni-Gold™ Recombigen® HIV will detect HIV antibody in 10 minutes, enabling healthcare providers to supply definitive negative and preliminary positive results to patients at the time of testing, potentially increasing the overall effectiveness of counselling and testing programs. In comparison, results from enzyme immunoassays (EIAs) currently used for HIV screening are often not available for 1-2

weeks. Using rapid tests, during 1995, a total of 697,495 more persons would have learned their HIV status.

Many advances have been made in HIV/AIDS prevention and treatment, including the development of effective antiretroviral therapies that have reduced HIV-related illness and death. Early knowledge of HIV infection is now recognized as a critical component in controlling the spread of HIV infection. Rapid HIV testing allows clients to receive results the same day, which is useful in urgent medical circumstances and setting where clients tend not to return for HIV test results (e.g., some STD clinics). Advances in these areas have resulted in revised recommendations for HIV screening of pregnant women, treating opportunistic infections and other sexually transmitted and bloodborne disease and managing occupational and non-occupational exposures and prophylaxis.

Safety

No adverse reactions were observed in any of the studies conducted.